

REMARKS

Reconsideration and withdrawal of the rejections set forth in the Office Action are respectfully requested in view of this amendment and the following reasons. By this amendment, claim 20 has been amended and new claims 21 and 22 have been added. Accordingly, claims 1-15 and 17-22 are pending in this application.

Claim 20 has been amended to incorporate the features of claim 1 and eliminate multiple dependency, as indicated by the Examiner. New claims 21 and 22 have been added to recite the present subject matter more clearly. Support for these features may be found at least in claims 1, 3, and 7, page 8, lines 9-13 and page 10, lines 10-23 of the present application, as originally filed, and in its Figs. 1 and 2. Thus, it is respectfully submitted that the above amendments introduce no new matter within the meaning of 35 U.S.C. §132.

For at least these reasons, entry of the present Amendment is therefore respectfully requested. Accordingly, Applicants request reconsideration and timely withdrawal of the pending rejections for the reasons discussed below.

Specification Objection

The disclosure was objected to because of the following alleged informalities: On page 7, line 22 recites “(inlet) port 16” whereas line 25 recites “outlet port 16.” Also, lines 24-25 recites “cylinder passage 24” whereas line 25 recites “extension 24.”

In response to this objection, the term “outlet port 16” recited in page 7, line 25 has been replaced with -- inlet port 16 --, and the term “extension 24” recited in page 7, line 25 has been

replaced with -- cylinder passage 24 --. Applicants respectfully submit that, by this amendment, the stated reason for objection has been overcome. Accordingly, Applicants respectfully request withdrawal of the objection to the specification.

Claim Objection

Claims 20 and 17-19 were objected to under 37 C.F.R. §1.75(c) as being allegedly in improper form because a multiple dependent claim should refer to other claims in the alternative only.

In response to this objection, claim 20 has been amended to eliminate dependency of claim 15. By this amendment, claim 20 depends from a single claim. Applicants respectfully submit that amended claim 20, and claims 17-19 dependent therefrom, overcome the stated objection. Accordingly, Applicants respectfully request withdrawal of the objection to claims 20 and 17-19.

Rejections Under 35 U.S.C. §102

Claims 1-7 stand rejected under 35 U.S.C. §102(b) as being allegedly anticipated by U.S. Patent No. 173,653 issued to Locke ("Locke"). Applicants respectfully traverse this rejection for at least the following reasons.

Applicants respectfully submit that the rejections of independent claim 1 must be withdrawn because the cited reference does not disclose, teach, or suggest all of the features of the claimed subject matter. "Anticipation requires the disclosure in a single prior art reference of

each element of the claim under consideration.” *W.L. Gore & Assocs. V. Garlock*, 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984). Further, “when evaluating the scope of a claim, every limitation in the claim must be considered. U.S.P.T.O. personnel may not dissect a claimed invention into discrete elements and then evaluate the elements in isolation. Instead, the claim as a whole must be considered.” *U.S.P.T.O. Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility*, page 9, October 26, 2005. As the Federal Circuit stated, “[a]nticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claim.” *Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Col.*, 730 F.2d 1452, 221 USPQ 481, 485 (Fed. Cir. 1984) (citing *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542, 220 USPQ 193 (Fed. Cir. 1983)).

Applicants note that claim 1 defines that “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...” In the Office Action, however, the Examiner fails to provide reasoning as to which part of Locke supports anticipation of such claim feature. Thus, this claim feature is not anticipated by the teachings of Locke.

Furthermore, claim 1 defines that “said poppet body has a first coaxial cylinder part slidingly and sealingly fitting said first passage, and a second coaxial cylinder part slidingly and sealingly fitting said second passage ...” This claim feature is not disclosed, taught, or suggested by Locke and is contrary to the teachings of the reference. With respect to this feature, it is respectfully assumed that the Examiner regards Locke’s ‘upper’ and ‘lower’ portions as anticipating

claim 1's first and second coaxial cylinder portions, respectively. If this is the case, then Locke's pipes L and Q must be equivalent to claim 1's first and second cylindrical passages, respectively. However, it is evident from Locke that although the 'upper' portion of the piston F is allegedly slidingly and sealingly received within the pipe Q, the 'lower' portion of the piston F, which rests freely within pipe L, is not slidingly and sealingly received within the pipe. In connection with this, it should be noted that the piston F comprises a seal S, yielding that the pipes Q and L are of different diameters. Therefore, it is impossible for the 'lower' portion of the piston F to be slidingly and *sealingly* received within the pipe L, as required by the claimed subject matter. Here, it should be understood that this difference in diameter causes Locke's three-way valve to become axially unbalanced since the pressure acting on the pistons F and N is different (*See* Locke, Fig. 1). The present subject matter neatly avoids this problem by providing the design recited in claim 1. Thus, such claim feature is not anticipated by the teachings of Locke.

Still furthermore, claim 1 defines that "said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ..." This claim feature is also not disclosed, taught, or suggested by Locke. With respect to this feature, the Examiner mischaracterizes the periphery of the pipe L disclosed in Locke as an equivalent of the annular valve seat recited in claim 1. However, contrary to the Examiner's belief, a pipe periphery does not anticipate a valve seat because a valve seat, particularly the valve seat of the present subject matter, is sealed in operation by axial pressure (a sealing rim adapted to seal the valve seat by applying axial pressure thereto). Thus, such claim feature is not anticipated by the teachings of Locke.

Even still furthermore, with respect to Locke's valve structure, one of ordinary skill in the art would not be able to achieve the purpose of reciprocation of the cylinder body as stated by Locke because, as shown in Locke's Fig. 3 where the cylinder body is located outside the pipe L, in this position, having the seal S mounted thereon, it would be impossible for the cylinder body to re-enter the pipe L to assume the position shown in Figs. 1 and 2, both due to the fluid pressure on the seal and the diameter of the seal which is originally greater than the diameter of pipe L in order to provide sealing. Hence, it is respectfully submitted that Locke lacks enabling disclosure and fails to disclose, teach, or suggest the feature recited in claim 1 of the poppet body "being adapted for reciprocation between two positions so that in a first position the poppet body seals said first seat valve... and a second position in which the poppet body seals said second valve seat."

In light of the above, Applicants believe that Locke does not recite several claim features as recited above and thus claim 1 is allowable over the reference.

In addition, as to new claim 21, Locke fails to disclose, teach, or suggest a valve seat having a dimension smaller than that of the cylindrical passage, or sealing between the poppet body and the valve seat by means of axial pressure. Accordingly, Applicants respectfully submit that claim 21 is also allowable over Locke. Similarly, new claim 22 is also allowable over Locke because the reference fails to disclose, teach, or suggest a poppet body having a first and second sealing rims adapted for sealing the valve seats by axial pressure.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §102(b) rejection of claim 1. Claims 2-7 depend from claim 1 and are allowable for at least this reason. New claims 21 and 22 are also allowable because they recite similar features as claim 1. Since none of the other

prior art of record discloses or suggests all the features of the claimed subject matter, Applicants respectfully submits that independent claim 1, and all the claims that depend therefrom, are allowable.

Rejections Under 35 U.S.C. §103

Claims 5-7 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Locke in view of U.S. Patent No. 2,973,021 issued to Grad ("Grad"). Applicants respectfully traverse this rejection for at least the following reasons.

To establish an obviousness rejection under 35 U.S.C. § 103(a), four factual inquiries must be examined. The four factual inquiries include (a) determining the scope and contents of the prior art; (b) ascertaining the differences between the prior art and the claims in issue; (c) resolving the level of ordinary skill in the pertinent art; and (d) evaluating evidence of secondary consideration. *Graham v. John Deere*, 383 U.S. 1, 17-18 (1966). In view of these four factors, the analysis supporting a rejection under 35 U.S.C. 103(a) should be made explicit, and should "identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the [prior art] elements" in the manner claimed. *KSR Int'l. Co. v. Teleflex, Inc.*, 127 S. Ct. 1727, 1741 (2007). Furthermore, even if the prior art may be combined, there must be a reasonable expectation of success, and the reference or references, when combined, must disclose or suggest all of the claim limitations. See *in re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Assuming *arguendo* that the references may be combined and a reasonable expectation of success exists, the combined references do not disclose or suggest all of the claim features.

Claims 5-7 depend from claim 1 and Grad fails to cure the deficiencies of Locke noted above with regard to claim 1. In other words, neither Locke nor Grad discloses, teaches, or suggests the recited features of claim 1, “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...,” “said poppet body has a first coaxial cylinder part slidingly and sealingly fitting said first passage, and a second coaxial cylinder part slidingly and sealingly fitting said second passage ...,” and “said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ...” Hence, claims 5-7 are allowable at least because they depend from allowable claim 1.

Claims 8 and 9 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Locke in view of Grad, further in view of U.S. Patent No. 3,519,312 issued to Cruse (“Cruse”). Applicants respectfully traverse this rejection for at least the following reasons.

Claims 8 and 9 depend from claim 1 and Cruse fails to cure the deficiencies of Locke and Grad noted above with regard to claims 1. In other words, neither Locke, Grad, nor Cruse discloses, teaches, or suggests the recited features of claim 1, “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...,” “said poppet body has a first coaxial cylinder part slidingly and sealingly fitting said first passage, and a second coaxial cylinder part slidingly and sealingly

fitting said second passage ...,” and “said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ...” Hence, claims 8 and 9 are allowable at least because they depend from allowable claim 1.

Claims 10-13 stand rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Locke in view of Grad and Cruse, further in view of U.S. Patent No. 2,484,888 issued to Hollerith (“Hollerith”). Applicants respectfully traverse this rejection for at least the following reasons.

Claims 10-13 depend from claim 1 and Hollerith fails to cure the deficiencies of Locke, Grad, and Cruse noted above with regard to claims 1. In other words, neither Locke, Grad, Cruse, nor Hollerith discloses, teaches, or suggests the recited features of claim 1, “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...,” “said poppet body has a first coaxial cylinder part slidably and sealingly fitting said first passage, and a second coaxial cylinder part slidably and sealingly fitting said second passage ...,” and “said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ...” Hence, claims 10-13 are allowable at least because they depend from allowable claim 1.

Claims 10-12 and 14 stand rejected under 35 U.S.C. §103(a) as being allegedly

unpatentable over Locke in view of Grad and Cruse, further in view of U.S. Patent No. 2,897,836 issued to Peters (“Peters”). Applicants respectfully traverse this rejection for at least the following reasons.

Claims 10-12 and 14 depend from claim 1 and Peters fails to cure the deficiencies of Locke, Grad, and Cruse noted above with regard to claims 1. In other words, neither Locke, Grad, Cruse, nor Peters discloses, teaches, or suggests the recited features of claim 1, “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...,” “said poppet body has a first coaxial cylinder part slidably and sealingly fitting said first passage, and a second coaxial cylinder part slidably and sealingly fitting said second passage ...,” and “said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ...” Hence, claims 10-12 and 14 are allowable at least because they depend from allowable claim 1.

Claim 15 stands rejected under 35 U.S.C. §103(a) as being allegedly unpatentable over Locke in view of Grad, Cruse, Hollerith, and Peters, further in view of U.S. Patent No. 5,306,428 issued to Tonner (“Tonner”). Applicants respectfully traverse this rejection for at least the following reasons.

Claim 15 depends from claim 1 and Tonner fails to cure the deficiencies of Locke, Grad, Cruse, Hollerith, and Peters noted above with regard to claims 1. In other words, neither Locke, Grad, Cruse, Hollerith, Peters, nor Tonner discloses, teaches, or suggests the recited features of

claim 1, “said housing has a first coaxial cylindrical passage adjacent said first valve seat and a second coaxial cylindrical passage adjacent said second valve seat ...,” “said poppet body has a first coaxial cylinder part slidingly and sealingly fitting said first passage, and a second coaxial cylinder part slidingly and sealingly fitting said second passage ...,” and “said valve chamber being defined between a first coaxial annular valve seat associated with said first port, and a second coaxial annular valve seat associated with said second port ...” Hence, claim 15 is allowable at least because it depends from allowable claim 1.

Accordingly, Applicants respectfully request withdrawal of the 35 U.S.C. §103(a) rejection of claim 1. Claims 2-15 and 17-20 depend from claim 1 and are allowable for at least this reason. New claims 21 and 22 recite similar features as claim 1 and thus are allowable for at least this reason. Since none of the other prior art of record, whether taken alone or in any combination, discloses or suggests all the features of the claimed subject matter, Applicants respectfully submit that independent claim 1, and all the claims that depend therefrom, are allowable.

CONCLUSION

Applicants believe that a full and complete response has been made to the pending Office Action and respectfully submit that all of the stated grounds for objections and rejection have been overcome or rendered moot. Accordingly, Applicants respectfully submit that all pending claims are allowable and that the application is in condition for allowance.

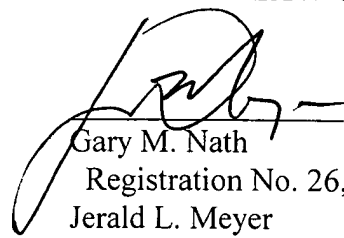
Should the Examiner feel that there are any issues outstanding after consideration of this response, the Examiner is invited to contact Applicants' undersigned representative at the number below to expedite prosecution.

Prompt and favorable consideration of this Reply is respectfully requested.

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